

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number
WO 2005/030147 A2

(51) International Patent Classification⁷: **A61K**

(21) International Application Number:
PCT/US2004/031690

(22) International Filing Date:
27 September 2004 (27.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/506,225 26 September 2003 (26.09.2003) US
60/585,652 6 July 2004 (06.07.2004) US

(71) Applicant and

(72) Inventor: **WHITLOCK, David, R.** [US/US]; 40 Nash
Street, Watertown, MA 02472 (US).

(74) Agent: **ANASTASI, John, N.**; Lowrie, Lando & Anastasi,
LLP, One Main Street, Cambridge, MA 02142 (US).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

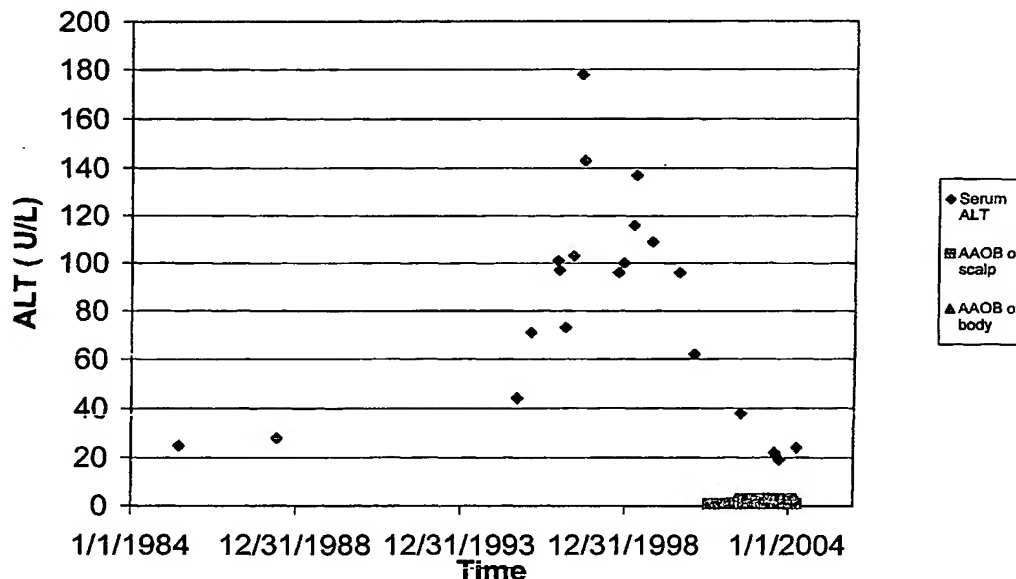
(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished
upon receipt of that report*

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: METHODS OF USING AMMONIA OXIDIZING BACTERIA



(57) Abstract: A use of ammonia oxidizing bacteria in the manufacture of a medicament and a method for treating a subject who has developed or is at risk of developing at least one of hypertension, hypertrophic organ degeneration, Raynaud's phenomena, fibrotic organ degeneration, allergies, autoimmune sensitization, end stage renal disease, obesity, diabetes type 1, osteoporosis, impotence, hair loss, cancer, aging, autism, and an autism spectrum symptom comprising positioning ammonia oxidizing bacteria close proximity of a surface of the subject, of nitric oxide and nitric oxide precursors using ammonia oxidizing bacteria.